CLAIM LANGUAGE:

1. (Currently amended) A recombinant antibody having a binding activity to 2,3,4,7,8-pentachlorodibenzofuran (2,3,4,7,8-PeCDF), which comprises ~~at least one polypeptide~~ a variable heavy chain or a variable light chain selected from the group consisting of:

(1) a variable heavy chain ~~a polypeptide constituting the H chain variable region of monoclonal antibody Dx3860 recognizing 2,3,4,7,8 PeCDF, and~~ having the amino acid sequence as shown in SEQ ID No. 5;

(2) a variable light chain~~a polypeptide constituting the L chain variable region of said monoclonal antibody Dx3860, and~~ having the amino acid sequence as shown in SEQ ID No. 6;

(3) a variable heavy chain~~a polypeptide constituting the H chain variable region of monoclonal antibody Dx3150 recognizing 2,3,4,7,8 PeCDF, and~~ having the amino acid sequence as shown in SEQ ID No. 7;

(4) a variable light chain~~a polypeptide constituting the L chain variable region of said monoclonal antibody Dx3150, and~~ having the amino acid sequence as shown in SEQ ID No. 8; and

(5) a variable heavy chain~~polypeptides~~ having amino acid ~~sequences~~ sequence as shown in any one of SEQ ID Nos. 64-67~~showing not less than 95% of homology to the amino acid sequences of the above polypeptides (1) (4),~~

and having a binding activity to 2,3,4,7,8-PeCDF~~; and~~

~~(6) polypeptides representing fragments of the above polypeptides (1) (5), and having a binding activity to 2,3,4,7,8-PeCDF~~.

2. (Canceled)

3. (Currently amended) ~~The~~ A recombinant antibody ~~according to claim 1~~ which comprises:

~~a polypeptide constituting the H chain variable region of monoclonal antibody Dx3860 and having the~~ a variable heavy chain region having the amino acid sequence as shown in SEQ ID No. 5, or ~~a polypeptide having an amino acid sequence showing not less than 95% of homology to the amino acid sequence of the former polypeptide~~ any one of amino acid sequences as shown in SEQ ID Nos. 64-67 and having a binding activity to 2,3,4,7,8-PeCDF; and

a variable light chain region~~polypeptide constituting the L chain variable region of monoclonal antibody Dx3860 and~~ having the amino acid sequence as shown in SEQ ID No. ~~6, or a polypeptide having an amino acid sequence showing not less than 95% of homology to the amino acid sequence of the former polypeptide and having a binding activity to 2,3,4,7,8-PeCDF~~.

4. (Currently amended) ~~The~~ A recombinant antibody ~~according to claim 1~~ which comprises:

a variable heavy chain region~~polypeptide constituting the H chain variable region of monoclonal antibody Dx3150 and~~ having the amino acid sequence as shown in SEQ ID No. 7~~, or a polypeptide having an amino acid sequence showing not less than 95% of homology to the amino acid sequence of the former polypeptide and having a binding activity to 2,3,4,7,8-PeCDF~~; and

a ~~polypeptide constituting the L chain~~ variable light chain region ~~of monoclonal antibody Dx3150 and~~ having the amino acid sequence as shown in SEQ ID No. 8~~, or a polypeptide having an amino acid sequence showing not less than 95% of homology to the amino acid sequence of the former polypeptide and having a binding activity to 2,3,4,7,8-PeCDF~~.

5. (Original) A DNA encoding the amino acid sequence of the recombinant antibody according to claim 1.

6. (Original) A cloning or expression vector comprising the DNA according to claim 5.

7. (Original) A transformant transformed with the cloning or expression vector according to claim 6.

8. (Currently amended) A process for preparing ~~the~~ a recombinant antibody ~~according to claim 1~~, which comprises cultivating the transformant transformed with an

expression vector according to claim 7 in a suitable medium, and recovering the recombinant antibody from the transformant or the medium.

9. (Currently amended) A method for immunologically capturing 2,3,4,7,8-PeCDF, which comprises ~~the use of~~ binding of the recombinant antibody according to claim 1, to 2,3,4,7,8-PeCDF.

10. (Currently amended) A method for immunologically determining 2,3,4,7,8-PeCDF in a sample, which comprises ~~the use of~~ binding of the recombinant antibody according to claim 1, to 2,3,4,7,8-PeCDF.